

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1, 3-6 and 8-10 are currently being prosecuted. The Examiner is respectfully requested to reconsider her rejections in view of the amendments and remarks as set forth below.

ENTRY OF AMENDMENT

It is respectfully requested that the present amendment should be entered in the official file in view of the fact that the amendments to the claims automatically place the application in condition for allowance. Alternatively, if the Examiner does not agree that the application is in condition for allowance, it is respectfully requested that the present amendment should be entered for the purpose of appeal. Applicants further submit that the present amendments do not raise new issues. Claims 1 and 6 have been amended to specify the relative distance between the print heads as noted by the Examiner in his comments. The tuning mechanism has also been inserted to make the operation of the printer more clear. This is also not considered to be a new issue since the tuning mechanism is discussed in great detail in the dependent claims. Claims 3 and 8 have been amended in view of the changes to the independent claims. The dependencies of claims 4, 5, 9 and 10 have also been changed to now depend directly from the independent claims. Applicants submit that no new issues are being presented by these changes.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 3-6 and 8-10 stand rejected under 35 U.S.C. § 103 as being obvious over Althauser et al. (IBM Technical Disclosure Bulletin, Vol. 23, No. 7A) in view of Murakami et al. (U.S. Patent 6,896,357). This rejection is respectfully traversed.

The Examiner states that Althauser et al. shows a printer with 2 print heads to provide ink droplets of different sizes so as to simultaneously provide droplets of two sizes in a print stroke to form multi-gradation pixels. The Examiner admits that Althauser et al. does not show ink droplets the same color or the specific size or the

droplets. The Examiner relies on Murakami et al. to show the same color droplets and the relative sizes of the droplets. In regard to previous arguments that Althauser et al. does not show a detecting module to check the operation and relative position of the print heads, the Examiner refers to the lead screw driven by a drive motor. The Examiner points out that the claim does not refer to the distance between the heads, but rather the relative position of the heads.

Applicants disagree with the Examiner that the previous language was shown by the combination of references. Applicants submit that the term "relative position of the print heads" does mean the position of one of the print heads in regard to the other. Nevertheless, in order to prevent any possible lack of clarity, Applicants have now changed the wording to refer to a relative distance between the print heads. Applicants have also added the phrase pointing out that the print heads are mounted on a tuning mechanism to adjust the relative distance between the heads in response to the ink detecting module. Thus, the claim can no longer be interpreted as reciting a mechanism merely for moving the heads such as shown by Althauser et al.

In the present invention, the tuning mechanism is used to adjust the distance between the two heads because they are made completely separately. This differs from the prior art cited by the Examiner where the head is made from a single piece where the distance is fixed. Since the two heads are separately made, which makes them cheaper and more easily made, an adjusting mechanism is necessary to fine tune the distance between the two. This entire concept is missing from both of the references. Applicants submit that claim 1 as presently amended now makes this arrangement completely clear and further overcomes the rejection suggested by the Examiner.

Independent claim 6 includes similar language and is also allowable for the same reason recited above.

Claims 3-5 and 8-10 depend from these independent claims and as such are also considered to be allowable. In addition, each of these claims recite other features that make them additionally allowable. These include the use of more than one tuning mechanism and having a tuning mechanism which is similar to a control module. Of particular interest are the limitations of claims 4 and 9 which specifically describe the tuning mechanism as including a base, a screw adjusting device and a sliding piece, a top rod and two springs in their assembly. This particular arrangement is not seen in Althauser et al. The Examiner has attempted to equate this with the servo motor and lead screw arrangement shown in the reference. However, this arrangement does not show all of the pieces described in claims 4 and 9. Accordingly, Applicants submit that these claims are additionally allowable.

CONCLUSION

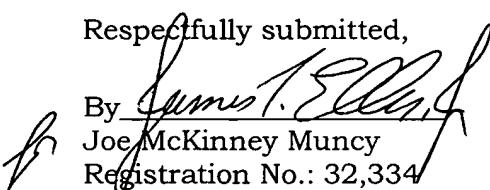
In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination. In view of this, reconsideration of the rejections and allowance of all the claims are respectfully requested.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

By


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